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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/605,520	06/27/2000	Marc A. Unger	20174-000230US	3937
20350	7590	03/08/2005	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			OLSEN, ALLAN W	
TWO EMBARCADERO CENTER			ART UNIT	
EIGHTH FLOOR			PAPER NUMBER	
SAN FRANCISCO, CA 94111-3834			1763	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/605,520

Applicant(s)

UNGER ET AL.

Examiner

Allan Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 December 2004.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 109-204 is/are pending in the application.  
4a) Of the above claim(s) 110-204 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 109 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 109 is rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,593,130 issued to Hannson et al. (hereinafter, Hannson).**

Hannson teaches a laminate comprising a first elastomeric layer 2, and a second elastomeric layer 3 (see column 2, lines 30-34). Hannson teaches the first and second elastomeric layers each have a recess formed therein (see figures 2 and 3). Hannson teaches the laminate structure comprises a flexible membrane therein (see abstract, column 1, lines 4-6).

### ***Response to Arguments***

Applicant argues:

*"Claim 109 recites 'bonding a bottom surface of the second elastomeric layer onto a top surface of the first elastomeric layer' and this element is neither described nor suggested in Hansson. While the reference shows a first elastomeric layer 2 above a second elastomeric layer, there is nothing to indicate that the two layers are bonded to each other. In fact, the only embodiment described in Hansson shows the two layers being held in place by an upper support plate 1, and a lower support plate 4. This shows that the first and second elastomeric layers in Hansson are pressed together by the support plates, and not bonded together like the elastomeric layers of the present invention."*

With respect to applicant's contention that bonding is "*neither described nor suggested in Hansson*" and that "*there is nothing to indicate that the two layers are bonded to each other*", the examiner notes that Hannson describes a fluid flow channel that is operative under pressure. In the absence of bonding between the elastomeric layers that define the flow channel, the structure described by Hannson would be destroyed by the application of a pressurized fluid. In other word, the Hannson's structure would be inoperative unless there was a bonding interaction between the elastomeric layers.

Furthermore, it is noted that Hannson is directed to a valve that is specifically designed to minimize the bonding interaction between two elastomeric layers that are in contact with one another. Hannson states, in the first paragraph of column 4:

"The valve opening time is determined by the difference between, on the one hand, the opening forces, i.e. the elasticity (contracting force) of the membrane and the fluid pressure in the channel, and, on the other hand, the closing "adhesive force" resulting when the two elastomer surfaces of the valve seat 6 and the membrane 7 are pressed together. This "adhesive force" as well as the membrane separation time related thereto will be approximately proportional to the contact area of the membrane 7."

In this passage, Hannson is describing the opening forces that are required to overcome the adhesive force between two elastomeric layers that are in contact within the valve portion of Hannson's structure. The examiner notes that the elastomer/elastomer contact area within the valve is very small relative to the elastomer/elastomer contact area surrounding the flow channel (see the interface of layers 2 and 3 in figure 4). As noted by Hannson, the adhesive force between elastomeric layers that are in contact with one another is approximately proportional to the contact area.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

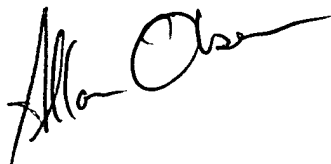
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M-F 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Mills can be reached on 571-272-1439. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Allan Olsen', with a stylized, flowing script.

Allan Olsen  
Primary Examiner  
Art Unit 1763